

**BRAKING TORQUE DEVELOPMENT BY USING DC ELECTRIC MOTOR**

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**STATEMENT BY THE AUTHOR**

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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**ABSTRACT**

**BRAKING TORQUE DEVELOPMENT USING DC ELECTRIC MOTOR**

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Benny Widjaja, S. T, M. T, Advisor

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The motor specification listed on a motor sometimes different from the real world specification. The motor test bench is one of method to test the real world specification of a motor. To test the motor, a brake will be applied as the simulation for the load given to the motor. The brake also using a motor that will generate a torque when a particular electrical circuit is connected with the motor terminal. To sense the torque value, a torque sensor will connected with the brake. The value of torque produced is based on the back emf and the buck converter output. To control the torque with specific value, PID is needed as the controller. As the result of this project, motor specification can be determined and displayed on the LCD.

*Keywords: Motor Test Bench, BLDC, Buck Converter, Torque Control*



## DEDICATION

I dedicate my thesis project to God, my family, my advisor, my co-advisor, my friends, my lecturers, SGU and the future of mechatronics.



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